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CABLE'S NEW TIME MACHINE:

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THE INTERACTIVE ALTERNATIVE

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NATIONAL CABLE TELEVISION ASSOCIATION

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49th Annual Convention and

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## P R O C E E D I N G S

1  
2           SPEAKER: The National Cable Television  
3 Association presents "Cable's New Time Machine: The  
4 Interactive Alternative," recorded live at the 49th Annual  
5 Convention and International Exhibition, Cable 2000, held  
6 May 7th through 10th, 2000, at the Ernest N. Moriel  
7 Convention Center in New Orleans, Louisiana.

8           Now let's begin this informative session.

9           MR. KNUDSON: Welcome to "Cable's New Time  
10 Machine: Interactive Alternative."

11           My name is Ed Knudson. I am with Intelocity,  
12 Incorporated.

13           I was thinking the other day about an  
14 often-published fact about television viewers, the average  
15 American or the average television viewer spending four and  
16 a half hours a day watching television, and I got to  
17 thinking about that and doing a little bit of math and if  
18 you think about the average person living to 80 years old or  
19 so, they will have spent over the course of their 80-year  
20 life 15 years watching television. It was kind of a  
21 disturbing fact. I think all of us on the panel and in this  
22 room have the responsibility to do whatever we can to get

1 that number up to 20, 25 years, something like this.

2 [Laughter.]

3 MR. KNUDSON: So I am sure you will join me. As I  
4 said, I am Ed Knudson. I am with Intelocity. We are a  
5 professional services firm offering design, development and  
6 integration services focusing solely on interactive and  
7 enhanced television.

8 I have a distinguished panel here with me today.  
9 On my left is Dan Levin. Dan is the Chief Technical Officer  
10 and Senior Vice President of Corporate Strategy for Replay  
11 TV. Dan plays a leading role in guiding Replay TV through  
12 the complicated and ever-changing world of enhanced  
13 television.

14 Next to Dan is Alan Tigason. Alan is the  
15 Executive Vice President of Sales and Business Development  
16 at WINK Communications, a provider of complete end-to-end  
17 systems for program and ad-synchronous electronic commerce  
18 on television.

19 Next to Alan is Craig Ennenstein. Craig is the  
20 Senior Vice President of Business Development and Strategy  
21 for Liberty Digital, Incorporated. Craig is responsible for  
22 leading Liberty Digital's e-commerce and enabling

1 infrastructure investment activity as well as facilitating  
2 the development of the company's strategic vision and  
3 organization.

4 Finally, bringing up the rear is our lone cable  
5 operator representative, Brian Sweeney from CableVision  
6 Systems. Brian is the Senior Vice President of Interactive  
7 and Internet Strategy at CableVision Systems, where he is  
8 responsible for leading the development and execution of  
9 CableVision's e-media strategy.

10 So what we are going to do here is go back through  
11 these slides -- that's always my favorite thing. Somebody  
12 puts my presentation on the last slide. Okay. Here we  
13 are -- starting from the beginning.

14 There's basically four issues that I want to try  
15 to cover in today's session, and what I will do is make some  
16 opening remarks about each of these, but then we will turn  
17 it over to our panelists to get their perspective.

18 The first one is content. What I want to discuss  
19 here is, you know, the fact that television isn't  
20 necessarily broken. What we are talking about with  
21 interactive and enhanced television is enhancing an  
22 experience that people are already pretty satisfied with for

1 the most part, so what are the most compelling services in  
2 terms of content that we can provide as an industry.

3 The second issue has to do with distribution.

4 Unlike the Internet, interactive television is going to be  
5 somewhat of a controlled distribution environment with  
6 broadband network operators playing somewhat of a gatekeeper  
7 role, if you will, in getting content to their subscribers,  
8 so what will be required of interactive television content  
9 providers as they get their content out to the communities.

10 The third issue is network diversity. When will  
11 advanced digital set tops and infrastructure be deployed in  
12 a sizeable amount that will stimulate interactive content  
13 development and how do content providers deal with the  
14 myriad of set tops, operating systems, middleware solutions,  
15 and authoring tools.

16 The fourth issue is revenue. What are the most  
17 lucrative ITV services that are available, what are the most  
18 promising revenue models that we have? Is it a subscription  
19 based proposition? Is it t-commerce? Is it advertising?  
20 And is interactive TV in general a pot of gold proposition  
21 or is it more of a panning for gold proposition?

22 Just so we are on the same page, what I thought I

1 would do is kind of lay out the way we see the interactive  
2 TV market today.

3 We have got a variety of videocentric services --  
4 that is enhanced TV and most of you are familiar with this.  
5 These are embedded triggers typically in a program stream  
6 that are linked to some additional information or  
7 interactivity that the viewer can enjoy.

8 Another one is video on demand. This is becoming  
9 one of the more popular services, simply buying a movie or  
10 program on demand, controlling it like you would your VCR at  
11 home.

12 Finally -- personal TV, the replay TV solutions,  
13 the TIVO solutions and things like that, the DBRs.

14 Over on the datacentric side, you have got  
15 interactive program guides that are available in the market  
16 today and becoming more full-featured including parental  
17 control, reminders, pay-per-view, et cetera.

18 You have got Internet over TV -- this would be the  
19 Web TV -- WorldGates and the like, essentially taking Web  
20 pages and displaying them on TV. Some of them would be  
21 transcoded for television.

22 Finally, we are seeing more walled garden type

1 services. These would be either destination sites that  
2 viewers can navigate to through a portal or a navigation  
3 shell or they could be linked through some of the enhanced  
4 TV triggers.

5 In between I think we have all the opportunities  
6 to make some money on this industry and that is interactive  
7 advertising -- again, either linked from a video stream into  
8 perhaps a destination site within a walled garden or to a  
9 Web content facility, and then we have got television  
10 commerce, which is linking the interactivity or linking the  
11 advertisements with the merchandisers themselves.

12 This is our perspective of the interactive  
13 distribution across diverse networks. You have got a  
14 variety of content. Content is a general term and somewhat  
15 ill-defined but we have made an attempt here to try to  
16 define a variety of categories for content, starting with  
17 independent producers developing content, the traditional  
18 network broadcasters and cable programmers, advertisers we  
19 lump into the content category, on down into the Internet  
20 sites we are trying to get on interactive TV platforms.

21 They are taking their content and they are running  
22 into a variety of very diverse networks including a variety

1 of hardware, operating systems, middleware, different  
2 billing systems that they have to integrate with, a variety  
3 of authorization and control systems. Where is the content  
4 hosted -- is it hosted by the network operator themselves or  
5 is it hosted by the content provider?

6 Finally, the broadband network operators again I  
7 think are playing somewhat of a gatekeeper role in that they  
8 are trying to develop a brand relationship with their  
9 subscribers. Interactive television is a new opportunity  
10 for them to do that, and their real interest is making sure  
11 that the viewers experience is consistent no matter what  
12 content comes onto their networks.

13 These are some Kagin numbers regarding the  
14 revenue, which is another topic we will talk about today..  
15 They break it up into again the variety of services that I  
16 showed you earlier. Looks like television commerce is one  
17 of the most promising revenue opportunities, but video on  
18 demand could certainly be healthy as well.

19 Again, these are Paul Kagin's numbers.

20 So now is the time we think for interactive  
21 television, unlike in the past, predominantly because there  
22 are more powerful and less expensive set tops and boxes



1     available now for the homes. Bandwidth is becoming lower in  
2     cost and continuing to go down.

3             Paul Kagin believes that over 75 percent of cable  
4     homes will be upgraded to high speed two-way broadband plant  
5     by the end of this year.

6             There are standard tools now for developing  
7     content, and those are becoming more pervasive in the  
8     marketplace.

9             There has never been a more competitive time  
10    between cable and satellite than there is today.

11            The standards that are being developed -- ATVF,  
12    DOXIS, DAVIC and others are helping to ignite application  
13    development.

14            Finally, the proliferation of the Internet has  
15    increased the propensity for viewers to interact. It is  
16    becoming less scary to interact with applications and they  
17    will transfer that to the television experience as well, but  
18    there are some challenges.

19            More content that is optimized specifically for  
20    television is needed, and there is a lot out there but we  
21    need more. Content needs to be developed in parallel with  
22    the set tops so as they begin to deploy, the advanced

1 digital set tops, there is a robust offering from day one,  
2 not a chicken-and-egg scenario.

3 Content will continue to be integrated or need to  
4 be integrated with the diverse networks that we see out  
5 there. Again, the network operators are trying to create a  
6 brand image, so if they have got an e-wallet system, an  
7 e-mail system, a calendar, search, parental control -- all  
8 these things will come with the set top and any piece of  
9 content that comes onto that set top they are going to  
10 expect to be somewhat integrated with those services, so  
11 that there is a consistent viewer experience every time.

12 Finally, more tools and services that enable  
13 interactivity are needed by the content development  
14 community. There are some good ones out there now and I  
15 expect that those will continue to get better and become  
16 more pervasive.

17 Then the cost of the hardware is low. It has  
18 never been lower, but I think it needs to continue to come  
19 down to fit the retail model and have people go out and pay  
20 the money to put one in their home and make that investment.

21 I will turn it over now to our panelists. Each of  
22 them will give you a quick five-minute perspective on their

1 view of the interactive television market, and then we will  
2 go back through some of these issues -- content,  
3 distribution, network diversity and revenue -- and discuss  
4 them in more length.

5 Dan, why don't we start with you? What is your  
6 perspective?

7 [Pause.]

8 MR. LEVIN: We shouldn't start with me, because I  
9 can't get my laptop to work -- oh, no -- all right, we will  
10 start with me.

11 I am Dan Levin and I work for a company called  
12 Replay TV, and what I am going to say today is all about  
13 personal television in general but I am going to use a  
14 particular instance of a personal television service which I  
15 know you will be shocked to hear will be the Replay TV  
16 service to illustrate my points.

17 Before I get started, I need to make a disclaimer.  
18 In late January Replay TV filed a registration statement  
19 with the Securities & Exchange Commission with respect to  
20 the initial public offering of our stock. That means we are  
21 in the so-called quiet period, and so I cannot speak in any  
22 detail about our company, only about our products. If I

1 appear evasive, it is not my personality.

2 If you think about the world of modern television,  
3 there are four groups that matter and they each matter  
4 tremendously to all of us -- viewers, advertisers, content  
5 creators, and content distributors. Each of these  
6 constituencies have interests that need to be met by any  
7 interactive television offering.

8 If it is not interesting to consumers, they are  
9 not going to use it. If they don't use it, they are  
10 certainly not going to pay for it and no advertiser is going  
11 to pay to have them use it. Either nobody will distribute  
12 it or create content for it if end-users don't like it, so  
13 we need to meet the goals and aspirations of each of these  
14 groups if we are going to be successful.

15 We feel that personal television does that in a  
16 very effective way.

17 On the one hand, end-users like television; on the  
18 other hand, we asked our users how many of them found  
19 television to be extremely appealing or very appealing and  
20 10 percent of them answered in the affirmative, so they like  
21 television. They watch a lot of television, but they are  
22 not ecstatic about it.

1           Part of the reason they are not ecstatic about it  
2    is it is getting increasingly complicated. There's more  
3    programming on every day. There are now 190 some-odd  
4    networks in the United States. People are having trouble  
5    finding the programming they want to watch. They are having  
6    trouble sorting through this huge set of offerings. They  
7    are not ecstatically happy about the fact that they have to  
8    watch television on somebody else's schedule when the  
9    Internet and pretty much everything else is moving in a very  
10   personalized direction.

11           Finally, the VCR, which was supposed to solve all  
12   these problems, is essentially unused by most of the  
13   American public for anything other than playing pre-recorded  
14   videos. Only about 15 percent of owners of VCRs actually  
15   use it to record any television programming.

16           Personal television helps solve all these  
17   problems. Personal television is about delivering  
18   television when you want to watch it. A personal television  
19   recorder or a digital video recorder uses a hard disc drive  
20   to store television programming on the set top box, and that  
21   means it doesn't matter whether the show was broadcast at  
22   2:00 in the morning while you were asleep or whether it was

1 broadcast at 4:00 in the afternoon when you were at work.

2 You can watch it whenever you want to watch it.

3 I was telling somebody the other day that I really  
4 think the West Wing is one of the best new shows on  
5 television. I enjoy it tremendously. I watch it every  
6 work. They said great, what time is it on? I said I have  
7 no idea, and I was being absolutely honest. I don't know  
8 when it is broadcast and I don't care when it is broadcast  
9 because my Replay TV records it and I watch it whenever I  
10 want to watch it.

11 Personal television is about television on my  
12 schedule, and that is incredibly compelling to people who  
13 watch TV. Those same people when asked if television while  
14 using a personal television service, Replay TV in  
15 particular, was extremely appealing or very appealing, 74  
16 percent of them answered in the affirmative; 10 percent  
17 without personal television; 74 percent with personal  
18 television.

19 Personal television is something that consumers  
20 love to use and it makes the television experience much more  
21 enjoyable for them, and that is good for all of us, because  
22 if nobody watches television then none of us make any money.

1           People in the cable industry are also faced with  
2     some interesting challenges. I am not going to speak about  
3     all four of these groups because I don't have too much time  
4     this morning and this afternoon, but most cable networks  
5     today have been aggregated through the acquisition of  
6     subscribers at prices at between \$3,000 and \$5,000 a sub,  
7     and those networks, once aggregated, are having to be  
8     developed at very high cost as well, driving the node sizes  
9     down, increasing the bandwidth of the network, implementing  
10    bidirectionality, et cetera.

11           What all this means is that MSOs need to generate  
12    new revenue streams in order to amortize those costs and it  
13    also means that they need to respond to the increasingly  
14    competitive modern environment by reducing subscriber churn  
15    through the delivery of interesting new services.

16           Personal television does all of those things as  
17    well. Personal television is a platform upon which very  
18    compelling new interactive services can be built, but it is  
19    in and of itself a very compelling interactive service and a  
20    service that generates very interesting revenue streams for  
21    network operators.

22           We believe that personal television services can

1 be the second most profitable interactive service that you  
2 can run on your network with only cable modems based  
3 Internet access delivering more revenue per subscriber per  
4 month than personal television can.

5 The increased attractiveness of television means  
6 that you will have fewer of your subscribers switching to  
7 satellite and fewer of them switching to telephone based  
8 networks in the future when those networks are available for  
9 television delivery, and that means lower churn, better  
10 subscriber retention, and in fact subscriber growth, and  
11 that is what we all care about.

12 We have got these very expensive networks. You  
13 have got to keep your subscribers and get new ones, and we  
14 think that personal television can help you do both of those  
15 things.

16 If you look at IDC's numbers for the number of  
17 personal television systems that are going to be deployed in  
18 the U.S., you get some awfully big numbers. Paul Kagin,  
19 Forester, and most of the other analysts in this space agree  
20 that personal television is going to be one of the killer  
21 applications of the interactive television world. It may  
22 not be the most interesting application. I am not going to



1 get up here and tell you that it is. But personal  
2 television matters and it is going to be growing explosively  
3 in the next few years.

4 If you look at the companies that are supporting  
5 people like Replay TV, and this is true of our competitors  
6 as well, they read like a Who's Who list of people in the  
7 television industry, from manufacturers and distributors  
8 like Panasonic, Sharp, Scientific Atlanta, and Motorola,  
9 cable operators like Comcast, Adelphia, satellite operators,  
10 down through the advertising community and the content  
11 community, these people are all excited about and supporting  
12 Replay TV's efforts to develop personal television.

13 We think personal television will be one of the  
14 most exciting new applications of the interactive age.

15 Thank you very much.

16 [Applause.]

17 MR. TIGASON: Hello, everyone.

18 I am here to speak in my brief five minutes to you  
19 about enhanced TV and I think it is particularly noteworthy  
20 to show that enhanced TV, as opposed to being a prognosis  
21 about the future, is a reality, so I am going to share with  
22 you some statistics from the actual deployment of

1 interactive programming and interactive advertising in the  
2 U.S.

3 Just as a preamble to that, our core business is  
4 at the intersection of the two circles that you saw in Ed's  
5 chart, the convergence of data and video signals, so our  
6 business revolves around adding interactive data to the  
7 television programming and advertising you already receive  
8 to allow you to either retrieve information on demand, be  
9 entertained, or respond to commercial offers.

10 Our service is usually provided free to consumers.  
11 In other words, there is no subscription fee, no  
12 pay-per-view fee, nothing. It is downloaded to existing  
13 cable and satellite boxes. Our business revolves around  
14 collecting transaction fees from advertisers and merchants  
15 who actually complete a transaction with a viewer.

16 Our service works across cable -- not PCs --  
17 but -- are you all right?

18 [Pause.]

19 MR. TIGASON: Okay? Back in the game.

20 We can deliver our service over cable, satellite  
21 or terrestrial, across a variety of platforms. I will  
22 describe that in more detail.

1           Our strategy really revolves around capitalizing  
2     on the emotional value, on the involvement value of  
3     television to deliver impulse e-commerce and lead  
4     generation. We believe that television's core strength is  
5     not as an information medium. It is as a persuasion medium.

6           We offer viewers the ability to interact and  
7     respond to offers with a single click of their remote  
8     control -- no typing, no entering your name and address, no  
9     complicated order forms. You are back to the programming  
10    that you want.

11          Our business model is a little unusual in that we  
12    create a new direct response revenue stream and then share  
13    that back, principally with network operators, and that is  
14    one of the main revenue streams that network operators  
15    derive from launching WINK.

16          So speaking to the reality, WINK is now available  
17    in over 200,000 cable homes across the U.S. and 20 cable  
18    markets including New York, Los Angeles, Forth Worth, St.  
19    Louis, and others. Thirteen of those markets are digital  
20    cable launches. We have a total of 8 million homes  
21    committed to the service, some of that in cable. A  
22    significant deployment deal with Direct TV for over 4

1 million homes, and a smattering of other platforms including  
2 notably Microsoft's WebTV platform.

3 But as we said, distribution is worthless without  
4 programming. WINK has all of the major networks signed as  
5 content partners for our platform including NBC, ABC, CBS  
6 and Fox, and all of the major cable networks. Today there  
7 are 1400 hours of enhanced programming airing across the  
8 WINK partner networks and that should rise to 2800 based on  
9 the contractual commitments from our network partners.

10 Lastly, because, after all, revenue is what  
11 matters, WINK has been very active in encouraging  
12 advertisers to take advantage of interactive television and  
13 we have now over 20 national advertisers using our  
14 technology to enhance their television spots.

15 And we are not just talking about it. We actually  
16 ran 3500 interactive ads last quarter, and there were  
17 actually 76 different video spots enhanced. I am going to  
18 cover some statistics here in a second that I think you will  
19 find pretty compelling, to speak directly to the revenue  
20 potential.

21 On the programming side, we are seeing that a  
22 typical enhanced program that offers interactivity has 20

1 percent of the viewing audience participating on a per hour  
2 basis. Remember, this is a service that is provided to  
3 everyone. It is a base level service provided to all  
4 digital cable subscribers or analog cable subscribers in the  
5 market, which means this isn't just some self-selected group  
6 that really is into interactivity. This is the common  
7 American television watcher.

8 The most popular service is information on demand,  
9 as you might expect -- sports, weather, financial updates,  
10 entertainment news -- but we are starting to see some really  
11 compelling usage on live programming as well, things like  
12 interactive sports events, game shows, et cetera, but  
13 speaking to the revenue, the advertising results, which were  
14 released for the first time at this show are particularly  
15 compelling.

16 As I mentioned we did 76 creatives, 23 different  
17 brands, 9 leading advertisers. Of the people who launched  
18 the offer -- in other words the people who saw a spot and  
19 decided they wanted to see what the offer was -- 42 percent  
20 took the offer. That is an astounding percentage.

21 Of the offers that were for a purchase, in other  
22 words where you were presented with an offer to buy

1 something, close to 20 percent of the people completed a  
2 purchase transaction. I think that speaks more than  
3 anything else could about the persuasion power of  
4 television.

5 Perhaps even more promising for the future, since  
6 we are in a mix of advanced analog and digital homes, it is  
7 noteworthy that digital homes have even higher usage than  
8 the analog ones. That is probably a combination of the  
9 audience being more involved, more interactively inclined,  
10 and the fact that the service is a little snazzier on the  
11 digital box.

12 So what is coming up for us? We are doing quite a  
13 bit of in-program t-commerce. So far I have mostly spoken  
14 about advertising enhancements. We announced at the show  
15 that as of now VH-1 is behind the music, Turners, WCW, Nitro  
16 and Thunder and NBC's Tonight Show with Jay Leno all offer  
17 viewers opportunities to purchase products right in the  
18 middle of the programming -- very, very powerful, and we  
19 will see a lot more networks doing that.

20 Secondly, of course, distribution -- the Achilles  
21 heel of all interactive services -- and while we are very  
22 proud of our progress there is certainly a lot more work to

1 do in cable and satellite and then of course the national  
2 launches with Direct TV and Web TV in the third quarter.

3           There are some very exciting opportunities in the  
4 research area and you will see us coming out with some  
5 additional reporting features and targeting features. You  
6 will see what is akin to a walled garden service delivered  
7 in WINK for the first time in the third quarter, both  
8 interactive shopping as well as information on demand.  
9 These are full screen interactive channels that you tune to  
10 just like you would a television channel.

11           You will see interfaces directly to a home  
12 shopping network fulfillment system, so that those things  
13 that are highly inventory-constrained can be ordered over  
14 television with real-time inventory, the availability  
15 confirmed on your TV screen.

16           Lastly, for those Web-connected boxes that cable  
17 plans to deploy and that Microsoft and others are pouring  
18 out retail Web TV product and things like that, we are  
19 offering a Web link service which our ability for the  
20 Web-connected box is to connect it directly to the Internet  
21 and access content that is personalized.

22           Thanks very much.

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1 [Applause.]

2 MR. KNUDSON: Thanks, Alan. Craig?

3 MR. ENNENSTEIN: Hi. I am Craig Ennenstein, from  
4 Liberty Digital. Just a couple quick questions for the  
5 audience.

6 I first wanted to find out who got more than seven  
7 hours of sleep last night? Just go ahead and raise your  
8 hand.

9 [Laughter.]

10 MR. ENNENSTEIN: One? Great. I got two.

11 Who ate beignet in the last 48 hours at Cafe du  
12 Monde? Okay, a few more people. Great. Just wanted to get  
13 you guys warmed up.

14 The real question I actually have for you is who  
15 in the audience believes that television today, not  
16 interactive TV but television today is a lean-back or  
17 passive experience? A lot of people. Go ahead with the  
18 first slide.

19 I actually believe that television today is not a  
20 lean-back or passive experience. I believe that some  
21 television today is. Let me tell you what I mean by that.  
22 I think infotainment type programming, informational or



1     entertaining type programming is without question a  
2     lean-back or passive experience where the user experiences a  
3     semi-catatonic state, jaw somewhat half-open, and simply  
4     absorbs for those many hours a day that they are watching  
5     TV, but there are certain types of programs that are either  
6     very interactive -- lean-forward -- or semi-interactive.

7             A couple of examples -- home shopping, I believe  
8     personally to be a very interactive experience. We have  
9     people who are asked to watch a program, get up, pick up a  
10    phone, go through a multistep process, and ultimately  
11    execute a commerce transaction. That is TV commerce or  
12    t-commerce today. It is not interactively enabled, unless  
13    you want to count the voice response system over at QVC, but  
14    effectively it is interactive, it is television, it is  
15    commerce, it exists today. That in the United States is  
16    over a \$5 billion annual market today -- pre-interactive TV.

17            Infomercials, another billion-plus, very similar  
18    requirement of the user, multistep process that ultimately  
19    yields a transaction and game shows. I think we have all at  
20    some point in time yelled answers out at the TV and been  
21    very frustrated with the people in the TV set. It is a  
22    semi-interactive experience the way it is designed today,

1 and that is before we get into some of the things that are  
2 happening with Sony's game show network products or some of  
3 the other game shows that are out there today.

4 I think that is the first thing that I want to  
5 leave you with is that we are not asking the users  
6 necessarily to go from a lean-back or passive mode into an  
7 active mode, but rather we are providing certain enablers in  
8 an interactive television environment to enhance an  
9 experience that already is very well established, already  
10 represents billions of dollars, and is already doing very,  
11 very well, so that is the first point I would like to make.

12 The second point I would like to make -- let's go  
13 to the second slide -- is that television in the interactive  
14 world is going to have a world of what I call walled  
15 gardens. Alan was just speaking a moment ago about WINK  
16 coming out with some walled garden product. If you go into  
17 certain other countries or you look at a lot of the plans of  
18 the MSOs or you go around some of the booths you will see  
19 there are walled garden products that are either already in  
20 existence or being built. Intelocity is one of the  
21 companies that is really at the forefront of building these  
22 walled gardens.

1           These walled gardens are places where people will  
2 go as a destination. It is a destination for communication.  
3 It is a destination for information. It is a destination  
4 for commerce. It is a destination for a number of different  
5 purposes, but it is not video. It is a more static  
6 environment. Of course it can be enhanced with video but it  
7 is effectively more static or data type environment where  
8 people in a constrained world will go to experience  
9 interactivity.

10           I believe that we are going to see a world of  
11 walled gardens where the MSO, the satellite provider, the  
12 VDSL provider will have to their benefit a desire to create  
13 the highest quality, most complete walled garden that they  
14 can possibly create. It should be an easy-to-use and safe  
15 environment. I am actually stealing that from Open in the  
16 United Kingdom, which has used that thought process to  
17 develop the product that they have built.

18           It will be an environment that is complete,  
19 meaning that if I can provide you with all the stores that  
20 you want to shop in, or all of the core information  
21 datapoints that you are looking to find, your sports scores,  
22 your horoscope, the weather, while I may offer you a back

1 door to the Internet that is behind the walled garden so you  
2 can go to wherever you wish, I have in turn given you so  
3 much value in this walled garden that you don't desire to  
4 leave. The optimal customer for the MSO is a customer who  
5 pays \$10, \$20 a month for access to a walled garden but  
6 access to the Internet outside of the walled garden, but  
7 never goes there at all. The MSO therefore captures all of  
8 the activity of that customer inside the walled garden --  
9 interactive ads, commerce, everything is happening in their  
10 domain. That is an optimal outcome for the MSO.

11 The other thing I think is going to happen from an  
12 environmental perspective is we are going to see the  
13 interactive television enabling what we call sector  
14 convergence. Sector convergence is where we bring together  
15 home shopping with e-commerce. It is what we call  
16 push-to-pull. Let me define that.

17 Push today exists. QVC, Home Shopping Network --  
18 these are push environments. When you go to these  
19 environments you have no question in your mind that somebody  
20 is trying to sell you something -- if not, wake up.

21 [Laughter.]

22 MR. ENNENSTEIN: But clearly it is a push

1 environment -- sell, sell, sell is their goal. If I put a  
2 button up on the screen and I enable someone to click rather  
3 than to call, I have dropped some cost out of the system. I  
4 potentially make it a more impulsive transaction, but I  
5 haven't really changed that much beyond that. I have  
6 improved the business model.

7 Pull is the Web. It is mission-driven. The user  
8 is out there seeking a purchase. We believe that this, too,  
9 will find its way onto the interactive television  
10 environment in these walled gardens, but there is something  
11 that can happen in an interactive TV environment that  
12 doesn't exist on the Web today, which is push-to-pull. I  
13 use the power of video, very emotional, very powerful,  
14 pushing billions of dollars in commerce already through its  
15 advertisements and through its home shopping, I use that  
16 power to draw you into an interest, to purchase something  
17 that is more complex that you have traditionally purchased  
18 through the TV and then I move you into a considered  
19 decision and area where you can go through a series of menus  
20 and navigate your way down to a decision to a transaction.

21 So very simply, if I am watching QVC I show you  
22 the blender. You want a blender. I have got you excited

1     about buying a blender, but you don't want that blender. I  
2     can take you to an environment where you can select from  
3     five others -- more complicated.

4             Travel -- I can show you travel destinations. I  
5     get you excited about going on a cruise. You don't  
6     necessarily want to go to the Caribbean. Let's select the  
7     Mediterranean. You don't want to stay in that class of  
8     service. Let's upgrade it. Let's pick our airfare. We can  
9     put these pieces together after I have stimulated your  
10    emotional thought process that I want to buy a travel  
11    package. That is push-to-pull. That is sector convergence.

12            We think what this leads to is what we are calling  
13    megaverticals.

14            Megaverticals are products that can be on the  
15    interactive TV that couldn't have been in any other  
16    environment before. These are vertical categories, whereas  
17    Home Shopping today is very much horizontally oriented,  
18    horizontally meaning demographically oriented. QVC  
19    predominantly targets soccer moms. Each of the home  
20    shopping networks target some demographic group. They'll  
21    sell jewelry, clothing, computers all in the same network.

22            We think that there are vertical classes of

1 product that could be pursued in this new environment where  
2 the considered decision transaction can now occur.

3 What you are going to have in that case is one  
4 brand. The same brand will be distributed across not only  
5 the interactive television but other platforms as well, your  
6 PC, your handheld devices, appliances, Web phones, you name  
7 it. You will have universal distribution to as many parties  
8 as possible. It's agnostic to cable, to satellite, to DSL,  
9 to wireless, and then finally it shares the underlying  
10 databases and e-commerce engines that allow it to make a  
11 transaction happen.

12 These elements today are Web elements as we think  
13 of them but ultimately they just become databases in  
14 commerce engines that empower all the various user  
15 interfaces which are appropriate to whatever device you are  
16 using, in this case the interactive TV.

17 And finally, t-commerce, which we were citing  
18 earlier as being something that is going to be very large  
19 according to a lot of people, is not an idea -- Alan talked  
20 about things that are happening now in the States -- it is  
21 also happening overseas. It is happening overseas far  
22 better and far bigger than we are even imagining right now

1 in the United States.

2 One of the best examples is Open, often called  
3 Open Interactive. It is on the B Sky B platform in the  
4 United Kingdom. It operates on the Open TV middleware  
5 platform. The names are coincidental. Open is seeing  
6 enormous statistics. Launched in October of last year, it  
7 is seeing over 45 percent of its population visit the area  
8 on a weekly basis. This is a walled garden environment with  
9 information, with commerce, et cetera.

10 It is seeing enormous transactions occur. With  
11 only 3 million users in the total potential population, it  
12 is already seeing category sales that are beyond belief.  
13 Certain customers such as Dominos Pizza are now seeing two  
14 percent of their total United Kingdom sales across all  
15 fashion of sale through the television set, through Open.

16 Certain websites in the UK are now seeing greater  
17 than 50 percent of their total revenue coming through the  
18 Open environment over your television set. We find the  
19 statistics staggering and incredibly powerful.

20 Finally, the MSOs in the UK are not far behind.  
21 NTL, cable and wireless, and Telewest, are aggressively  
22 rolling out similar types of walled garden and Web



1 connectivity services, once again with a heavy focus on  
2 e-commerce.

3 We believe very, very sincerely that t-commerce is  
4 now, it is real, and we sincerely hope that the United  
5 States gets their act together and moves as quickly as some  
6 of our counterparts in other countries have.

7 We look forward to seeing the U.S. companies make  
8 their way over to the U.K. and see what people are doing  
9 because they are way, way ahead of us and we often don't  
10 think of it that way but that is what is happening, so we  
11 are very excited overall.

12 We absolutely believe that t-commerce is a lead  
13 category for the Internet, the interactive TV and all of the  
14 other devices that will be out there and we look forward to  
15 seeing what people come up with, because we think the  
16 innovations will be astounding. Thank you.

17 [Applause.]

18 MR. SWEENEY: Hi, everyone. I am Brian Sweeney.  
19 I am Senior V.P. of e-media for CableVision Systems.

20 As somebody who has to deal with all of these  
21 issues both from a cable operator side as well as from a  
22 content provider in the forms of all of the networks that we

1     manage under Rainbow Media, I think Ed has done a very good  
2     job in terms of outlining all of the issues that we face and  
3     trying to piece this all together.

4             The topic of today's discussion is what is  
5     interactive TV going to look like, and I think we have heard  
6     some very interesting perspectives from the other panelists  
7     up here. I don't know if we are going to get to the answer  
8     today but I think from what we have seen in the growth of  
9     the Internet that the consumer demand for interactivity is  
10    out there.

11            A couple of interesting statistics. If you look  
12    at -- if 90 percent of the homes out there have television  
13    sets now, approximately cable penetration is around 70  
14    percent on a national basis and you have got PC penetration  
15    with some Internet connectivity of about 40 percent.

16            As we start to roll out digital platforms and  
17    interactive services to the TV, we are going to be  
18    introducing interactivity to a whole range of people who  
19    have not experienced the Internet or know what that  
20    experience is like, so our challenge is going to be how do  
21    you come up with interactive concepts that this whole new  
22    audience is going to identify with and want to interact